AN OVERVIEW OF ONLINE GAME ADDICTION AMONG INDONESIAN EARLY ADULTHOOD DURING THE COVID-19 PANDEMIC

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ABSTRACT

The COVID-19 pandemic has brought about changes in human life, including changes in human behavior related to the use of digital technology. Indonesia is the third country with the highest number of online game players in the world. Excessive use of online games can lead to online game addiction in users. Online game addiction can happen to anyone, including early adults. This study aims to determine the excessive use of online games and the level of addiction in early adulthood during the COVID-19 pandemic. The method used in this study is a quantitative method with cross-sectional design based on descriptive analysis. The sampling technique that is used is the purposive sampling. Participants in this study were early adults with the age range of 18-25 years who played online games as many as 100 participants. The measuring instrument used in this study is The Indonesian Game Online Addiction which consists of 7 questions with a likert scale interval from one to five. The level of online game addiction is relatively high at 47 participants (47%) in early adulthood during the COVID-19 pandemic. It can be concluded that the level of addiction from online game users for participants with an early adult age range 18-25 years is relatively high, with the majority of players being male and female, which are almost equal. For further research, it is recommended to further develop research on online game addiction in early adulthood.

Keywords: Online game addiction, Indonesian, early adulthood, COVID-19

1.   PREFACE

The COVID-19 pandemic has created many changes to society, supported by technological developments that are increasingly advanced and rapid every day. The COVID-19 virus can easily spread and increase the case in a short period of time. Therefore, all activities both in the education and work sectors are carried out online which are expected to reduce cases of COVID-19 pandemic. Since all activities are carried out online, technology users are increasing rapidly, especially internet users. Based on data from Kompas, internet services users in Indonesia have reached around 202.6 million users, an increase of 27 million compared to 2020, with a percentage increase of 15.5 percent. The internet addiction rate in DKI Jakarta province, especially in online gaming, becomes the highest in the world at 31%. The increase of internet users with ease of access will impact the users if used excessively. With the rapid advancement of the internet, it is hoped that all users can use the internet wisely.

One of the uses of the internet is a game called online game. Online games are games that involve more than one player connected via the internet. Indonesia is the third country with the highest number of online game players in the world using mobile phones, personal computers, or consoles, with 94.5% of internet users with an age range of 16-64 years old. Online game players are more likely to use mobile phone devices to play. This is supported by data from Liputan 6, which stated that the number of mobile gamers has doubled, application usage has increased fourfold, and the frequency of time in playing games has increased fourfold compared to before the pandemic in Indonesia. Online gaming with mobile phones has three advantages, namely portability,

immediacy, and accessibility. Online gaming can be one of the most effective and efficient in increasing positive feelings.

International literature and data related to online game addiction in early adulthood are minimal and are only emphasizing adolescence. Based on the previous study, related to online game addiction in adolescents in Indonesia, shows that adolescents in Indonesia experience an increase in online game addiction by 10.15%. The research that has been done by shows that early adulthood, especially students, are the least to experience online gaming addiction as high as 47.7%. Related studies from for online gaming addiction in early adulthood shows that the majority of the participants experience a low addiction rate.

Related Work
Online Game Addiction
Online game addiction is defined as repetitive and prolonged behavior in playing online games, which can result in disturbances in daily activities, which has been defined as a tentative psychiatric disorder that requires further study. The benchmark for someone experiencing online game addiction is measured based on 7 core aspects, namely (a) salience, (b) tolerance, (c) mood modification, (d) relapse, (e) withdrawal, (f) conflict and (g) sleep deprivation. The main factors that can affect Online Game Addiction according to DSM-5 are (a) Environment, and (b) Genetic and Physiological. In the context of the environment, online game addiction is related to the availability of facilities in the form of devices that can be connected to the internet network. Based on the genetic context, it shows that men are more likely to play games excessively than women Supported by physiological conditions in which men and women have different hormones and different ways of thinking. However, the rate of online game addiction is starting to show an increase in women. Excessive play of online games can lead to online game addiction in users. The adolescent developmental stage is more susceptible to online game addiction than the adult developmental stage, but adults can also experience online game addiction tendencies. The stage of development that does not receive full attention, especially in online game addiction, is the early adulthood stage. Early adulthood is a stage of development that is prone to one or more addictions. Based on a survey from CNN Indonesia, 14.4% of early adults in Indonesia suffer from online game addiction.

The research that has been compiled is expected to be able to contribute, especially in clinical psychology. In addition, this paper can show the latest research on the online game addiction in early adulthood in Indonesia during the COVID-19 pandemic. Therefore, this study aims to (a) determine the excessive use of online games in early adulthood during the COVID-19 pandemic; (b) To find out the description of the level of addiction in early adulthood during the COVID-19 pandemic. The findings in this study can provide an idea of how the level of addiction in early adulthood is during the COVID-19 pandemic.

The structure of writing in this paper consists of five parts. First part is the background of the problems regarding the phenomenon of online game addiction in early adulthood during the COVID-19 pandemic in Indonesia. Second, is a literature review on online games addiction, the theory used, and previous studies. Third, regarding the research methods used in stages and the characteristics of the participants in detail. Fourth, a detailed description of the findings and discussions related to the research. Fifth, regarding the conclusions and suggestions for future research.

The study was conducted in the Jabodetabek area for online game players during the COVID-19 pandemic.

2.   RESEARCH METHOD
Study Design
The method used in this study is a quantitative method with cross-sectional design which is based on descriptive analysis. Descriptive analysis research was conducted with the aim of knowing the description of the excessive use of online games and the level of addiction in early adulthood during the COVID-19 pandemic.

Population and Sampling
Participants were determined through a data collection technique in the form of purposive sampling. The criteria for participants in this study are early adults aged 18-25 years old who play online games in Jabodetabek area, without being limited by ethnicity, religion, and race.

Instrumentation
The level of online game addiction can be measured using the measuring by the Instrumentation, The Indonesian Online Game Addiction which consists of 7 core aspects, namely (a) salience (M=3.29, SD=1.30); (b) tolerance (M=2.85, SD=1.14); (c) mood modification (M= 3.21, SD= 1.40); (d) relapse (M=2,84, SD=1.40); (e) withdrawal (M= 2.76, SD= 1.41); (f) conflict (M= 2.22, SD= 1.36); and (g) sleep deprivation (M= 3.56, SD= 1.28). Participants were asked to answer how often on a 5-point scale (1-Never to 5-Very Often). This Instrumentation can measure the excessive use of online games.

Procedure
Data collection was carried out on February 20, 2021. The number of respondents was 100 participants. The distribution of research instruments is distributed to social media such as Instagram, Linked-in, and social media applications such as Line and Whats-App using the Google Form survey administration application, which is supported by devices such as laptops and mobile phones. In addition, the authors also asked for help from the closest people to distribute this research questionnaire.

Data Analysis
The author uses the Statistical Product and Service Solution (SPSS) version 25.00 software as the tool to process research data analysis. After the data was collected, the researchers carried out the reliability of the measuring instrument, which showed that the measuring instrument used was reliable with a Cronbach alpha of 0.844 (> 0.7). Based on this finding, it can be concluded that the reliability of the measuring instrument is acceptable. Besides that, the author also did descriptive tests by doing classification of the criteria, based on the clinical cut-off construction from the measuring instrument, and did cross-tabulation analysis based on the criteria from the determined clinical cut-off.

Characteristics of Participants
Participants in this study were 100 early adults who play online games with an age range of 18-25 years consisting of 61 male (61%) and 39 female (39%). The most common age in this study was 21 years of age which consisted of 28 participants (28%) and the least number of age of this study was 25 years of age which consisted of 5 participants (5%).

Table 1
Participants' Characteristics Based on Gender

Gender	Frequency	Percentage
Male	61	61%
Female	39	39%
Total	**100**	**100%**

Table 2
Participants' Characteristics Based on Age

Age	Frequency	Percentage
18 years	11	11%
19 years	8	8%
20 years	11	11%
21 years	28	28%
22 years	11	11%
23 years	18	18%
24 years	8	8%
25 years	5	5%
Total	**100**	**100%**

The domicile of the participants in this study covered the Jabodetabek area, with DKI Jakarta area with 67 participants (67%), Bogor area with 8 participants (8%), Depok area with 3 participants (3%), Tangerang area with 15 participants (15%), and Bekasi area with as many as 7 participants (7%). Most of the participants were in the DKI Jakarta area with 67 participants (67%) and the least participants were in Depok area with 3 participants (3%). Participant occupations consist of students with as many as 61 participants (61%) which is the majority of the participants occupation, fresh graduates with as many as 18 participants (28%), employees with as many as 19 participants (19%) and other occupations with as many as 2 participants (2%).

Table 3
Participants' Characteristics Based on Domicile

Domicile	Frequency	Percentage
DKI Jakarta	67	67%
Bogor	8	8%
Depok	3	3%
Tangerang	15	15%
Bekasi	7	7%
Total	**100**	**100%**

Table 4
Participants' Characteristics Based on Occupation

Occupation	Frequency	Percentage
Students	61	61%
Fresh Graduate	18	18%
Employee	19	19%
Others	2	2%
Total	**100**	**100%**

3.   RESULT AND DISCUSSION

The Indonesian Online Game Addiction measuring instrument [9] can show a depiction of a person or individual playing online games excessively. In playing online games, the device that was mostly used by participants was mobile phone, with as many as 67 participants and the device that is the least used was other devices (console) by 1 participant (1%).

The online game that is often played by participants is Mobile Legend with 37 participants (37%) and the least played game by participants is Player Unknown's Battleground (PUBG) with 12 participants (12%). The response from most parents of participants was normal (neutral) as many as 81 participants (81%), and the least response was happy as many as 2 participants (2%).

The intensity of playing online games for the most participants is only at certain times as many as 49 participants (49%) and the least intensity for playing online games only Saturday/Sunday/holidays as many as 7 participants (7%). The longest time of participants in playing online games was at most 6 hours with 18 participants (Mean = 5.82, SD = 4.00). The average number of participants playing online games in one week is 6 – 7 days a week with as many as 46 participants (46%) and participants with the least playing of 1 day per week as many as 12 participants (12%). The average length of time when playing online games in one day is 1-2 hours with as many as 19 participants (19%) and at least 0-30 minutes with as many as 4 participants (4%). Weekly expenditures of participants for playing at internet cafes include 2 participants (2%) with a weekly expense of Rp. 20,000 – Rp. 50,000 while 91 participants (91%) do not play at internet cafes.

Monthly expenditures of most participants for online games are at less than Rp. 20,000 or not at all with as many as 59 participants (59%), and the monthly expenditures of least participants are Rp.200,000 – Rp.300,000 with as many as 2 participants (2%).

The category of participants based on online game addiction is divided into low, medium, and high which refers to the measuring instrument used, which are as follows, < 14 is low, 14-21 is moderate, and > 22 is high. The average value of the online game addiction variable is 1.39 with a standard deviation of 0.49. Based on the data, participants with a low level of addiction were 19 participants (19%), participants with moderate addiction levels were 34 participants (34%) and participants with a high level of addiction were 47 participants (47%). The highest level of participants' addiction was the high level with 47 participants (47%) and the lowest level of participants' addiction was the low level with 19 participants (19%). The results of this study are in line with the results of a previous study conducted in 2013 concerning the cases of online game addiction for adolescent participants which were quite worrying. Through this research, we know that adolescents are not the only ones with online gaming addiction, but early adults are also quite worrying.

Table 5
Participants' Level of Online Game Addiction

Online Game Addiction Level	Frequency	Percentage
Low	19	19%
Moderate	34	34%
High	47	47%
Total	100	100%

The results of the homogeneity test between the online game addiction variable and the gender of the participants using the Levene Test, showed that the value of F = 0.870, p = 0.353 (> 0.05). Thus, it can be concluded that the data is homogeneous. Based on data in terms of gender and level of online game addiction, male participants with low addiction levels were 13 participants (13%), moderate addiction levels were 15 participants (15%), and high addiction levels were 33 participants (33%). The female participants with a low level of addiction as many as 6 participants (6%), a moderate level of addiction as many as 19 participants (19%) and a high level of addiction as many as 14 participants (14%). The most number of male participants are classified as high level online gaming addiction with 33 participants (33%), while the most number of female participants are classified as moderate level online gaming addiction with 19 participants (19%). This is in line with research based on genetic and physiological contexts, that men are the most excessive users of online games [12-14] and there are studies that show that the level of online game addiction begins to increase in women. The online game device that is often used is mobile phone, with 32 male participants (32%) and 35 female participants (35%) from a total of 67 male and female participants (67%). This is in accordance with the existing phenomenon that the number of mobile gamers has doubled in Indonesia [5]. The type of online game that is often played is Mobile Legends, with 17 male participants (17%) and 20 female participants (20%) from a total of 37 male and female participants (37%). The intensity of online gamers in the participants based on gender is that male participants tend to play games every day with as many as 33 participants (33%) and female participants tend to play games at certain times only as many as 25 participants (25%).

Table 6
Participants' Level of Online Game Addiction based on Gender

Gender	Low	Moderate	High	Total
Male	13	15	33	61
Female	6	19	14	39

The results of the homogeneity test between the online game addiction variable and the age of the participants using the Levene Test, showed that the value of F = 0.926, p = 0.490 (> 0.05). Thus, it can be concluded that the data is homogeneous. Based on data that is reviewed from the age of the participants and the level of online game addiction, participants aged 18 years classified with low level addiction were 2 participants (2%), the level of addiction was classified as moderate with as many as 5 participants (5%), and the level of addiction was classified as high as many as 4 participants (4%). Participants aged 19 years classified with low level addiction were 2 participants (2%), the level of addiction was moderate with as many as 2 participants (2%) and 4 participants were classified as high (4%). Participants aged 20 years with a low addiction level were 2 participants (2%), moderate addiction level was 3 participants (3%) and 6 participants were classified with high level addiction (6%).

Participants aged 21 years with a low level of addiction were 5 participants (5%), a moderate level of addiction was 13 participants (13%) and 10 participants were classified as high level addiction (10%). Participants aged 22 years with a low addiction level were 2 participants (2%), moderate addiction level was 3 participants (3%) and 6 participants were classified with high level addiction (6%). Participants aged 23 years with a low level of addiction were 2 participants (2%), a moderate level of addiction was 5 participants (5%) and 11 participants were classified with high level addiction (11%). Participants aged 24 years with a low level of addiction were 2 participants (2%), a moderate level of addiction was 1 participant (1%) and 5 participants were classified with high level addiction (5%). Participants aged 25 years with a low level of addiction were 2 participants

(2%), a moderate level of addiction were 2 participants (2%) and 1 participant was classified with high level addiction (1%).

Participants who experienced the most high level online game addiction by age were 23 years old, with 11 participants (11%) from a total of 47 participants (47%) classified as having a high level of online game addiction. Based on the responses from parents related to the age of 23 years, the majority of parents showed a normal (neutral) response when their children played online games with as many as 15 participants (15%), and showed an unhappy response when their children played online games with as many as 3 participants (3%).

Table 7
Participants' Level of Online Game Addiction based on Age

Age	Low	Moderate	High	Total
18 Years	2	5	4	11
19 Years	2	2	4	8
20 Years	2	3	6	11
21 Years	5	13	10	28
22 Years	2	3	6	11
23 Years	2	5	11	18
24 Years	2	1	5	8
25 Years	2	2	1	5

The results of the homogeneity test between the online game addiction variable and the participant's domicile using the Levene Test, showed that the value of $F = 0.730$, $p = 0.0574$ (> 0.05). Thus, it can be concluded that the data is homogeneous. Based on the data that is reviewed from the participants' domicile and online game addiction level, participants who live in DKI Jakarta with a low level of addiction are 12 participants (12%), moderate level addiction with as many as 26 participants (26%), and high level addiction with as many as 29 participants (29%). Participants who live in Bogor with low addiction levels are none, or 0 participants (0%), moderate level addiction is 1 participant (1%), and high addiction level are as many as 7 participants (7%).

Participants who live in Depok with a low level of addiction are 1 participant (1%), moderate level addiction is 1 participant (1%), and a high level of addiction is 1 participant (1%). Participants who live in Tangerang with a low level of addiction are 3 participants (3%), a moderate level of addiction is 5 participants (5%), and a high level of addiction is 7 participants (7%). Participants domiciled in Bekasi with a low level of addiction are 3 participants (3%), a moderate level of addiction is 1 participant (1%), and high addiction level are as many as 3 participants (3%).

The participant with the most number of high-level online game addiction based on domicile was from DKI Jakarta, with as many as 29 participants (29%) out of 47 participants. The results of this study are in line with the phenomenon, that the level of internet addiction, especially online gaming addiction in DKI Jakarta is the highest in the world. The weekly expenditure of DKI Jakarta participants playing at internet cafes is as follows with the majority of the participants not playing at internet cafes with as many as 64 participants (64%), spending for internet cafes less than Rp. 20,000 is 1 participant (1%), and expenses for internet cafes ranged from Rp. 100,000 to Rp. 200,000 is 2 participants (2%).

Monthly expenditures for online games for DKI Jakarta participants with majority of less than the price Rp. 20.000 with as many as 41 participants (41%), Monthly expenditures for online games

ranging from Rp.20.000 to Rp.50.000 with as many as 9 participants (9%), Monthly expenditures for online games ranging from Rp.50.000 to Rp.100.000 with many as 8 participants (8%), Monthly expenditures for online games ranging from Rp.100.000 to Rp.200.000 with as many as 2 participants (2%), and monthly expenditures for online games higher than Rp. 300.000 with as many as 7 participants (7%).

Table 8
Participants' Level of Online Game Addiction based on Domicile

Domicile	Low	Moderate	High	Total
DKI Jakarta	12	26	29	67
Bogor	0	1	7	8
Depok	1	1	1	3
Tangerang	3	5	7	15
Bekasi	3	1	3	7

The results of the homogeneity test between the online game addiction variable and the participants' occupation using the Levene Test, showed that the value of $F = 2.051$, $p = 0.112$ (> 0.05). Thus, it can be concluded that the data is homogeneous. Based on data that is reviewed from the participants' occupations and the level of online game addiction, participants who are students with a low level of addiction are 12 participants (12%), moderate addiction level are 23 participants (23%), and high addiction level are 26 participants (26%). Participants who are fresh graduates with a low level of addiction are 1 participant (1%), moderate addiction level are 7 participants (7%), and high addiction level are10 participants (10%).

Participants who work as employees with low addiction levels are 6 participants (6%), moderate addiction levels are 4 participants (4%), and high addiction levels are 9 participants (9%). Participants who work in other fields with low addiction levels are 0 participants (0%), moderate addiction levels are 0 participants (0%), and high addiction levels are 2 participants (2%).

The participants who experienced the most high level online game addiction based on occupation were students, with as many as 26 participants (26%) out of 47 participants. This research is not in line with several previous researches regarding online gaming addiction in early adulthood especially in students [10-11] which shows that the most common result for online gaming addiction is low level addiction. The longest time playing online games in one day is mostly for students, which is 5 hours with 10 participants (10%). The average daily play time in one week for the majority of students is 6-7 days per week with as many as 25 participants (25%). Supported by detailed data, namely 1 day per week with as many as 8 participants (8%), 2-3 days per week with as many as 19 participants (19%), and 3-4 days per week with as many as 9 participants (9%).

The average length of time playing online games in one day for the majority of students is 1-2 hours with as many as 12 participants (12%). Supported by detailed data, namely 0-30 minutes with 6 participants (6%), 2-3 hours with 7 participants (7%), 3-4 hours with 10 participants (10%), 4-5 hours with 11 participants (11 %), 5-6 hours with 3 participants (3%), 6-7 hours with 5 participants (5%), and more than 7 hours with 5 participants (5%).

Table 9

Participants' Level of Online Game Addiction based on Occupation

Occupation	Low	Moderate	High	Total
Students	12	23	26	61
Fresh Graduate	1	7	10	18
Employee	6	4	9	19
Others	0	0	2	2

4.   CONCLUSIONS AND RECOMMENDATIONS

This study concludes that early adulthood in Indonesia suffers from online game addiction. Based on the results of the study described above, it can be concluded that the level of addiction from online game users within the early adulthood stage with the age range of 18-25 years is relatively high with the majority of players being male and female which are almost equal. In addition, mobile phones have become one of the devices which are most often used by early adults in playing online games. Based on occupation, students tend to experience the most online game addiction in the high category. However, this study in 2022 can provide an updated picture of the level of online game addiction in early adulthood during the COVID-19 pandemic. DKI Jakarta is the domicile with the highest level of participant online game addiction with a high category. The researcher would like to convey some suggestions related to further research. For further research, it is recommended to further develop research on online game addiction in early adulthood, because many of the early adults who play online games are the same as adolescents. Researcher also suggests adding and expanding the research participants. After that, the researcher also suggests looking into several factors in depth why someone plays online games, one of which is by using qualitative methods to strengthen arguments regarding online game addiction.

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